



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/580,156

05/19/2006

Toshihiro Tomita

65632 (71719)

8056

21874 7590 11/12/2008  
EDWARDS ANGELL PALMER & DODGE LLP  
P.O. BOX 55874  
BOSTON, MA 02205

EXAMINER

KHANNA, MADHU

ART UNIT

PAPER NUMBER

2451

MAIL DATE

DELIVERY MODE

11/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,156	<b>Applicant(s)</b> TOMITA ET AL.	
	<b>Examiner</b> MADHU KHANNA	<b>Art Unit</b> 2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14 and 16 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This communication is in response to Amendment filed 08/13/2008 under 37 C.F.R. 1.111. Claims 1 and 15 have been amended and claim 2 has been cancelled. Claims 1 and 3-16 remain pending.

#### ***Claim Objections***

2. Applicant's amendment of the dependency of claim 11 to be only dependant on claim 6 has been considered. The amendment has obviated previously raised objection, as such the objection is hereby withdrawn.

3. Applicant's argument that the arrangement of the claims is only a suggested arrangement and not required, has been considered. The argument obviates previously raised objection, as such the objection is hereby withdrawn.

#### ***Response to Arguments***

4. Regarding claims 1 and 8, it is argued that the applied references do not teach the claimed limitations. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment.

#### ***Claim Rejections - 35 USC § 103***

Art Unit: 2451

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake et al. (US 2001/0042118) in view of Forslow (US 6,954,790) in view of Gandhi et al. (US 7,085,814) and in further view of Kim (US 6,670,909).

Regarding claim 1, Miyake teaches a control system established through a network, the control system comprising:

- a management node (31, 32, and 33 of FIG. 3) for monitoring and operating the system component nodes (34 of FIG. 3) through the network and managing control of the whole control system (FIG. 3 generally illustrates the configuration of a network operation/management system, [0088]), wherein the management node includes:

- a communication section for performing communication through the network (e.g. a communication I/O interface controller 614, [0100]);

- a storage section for storing definition information of the system component nodes (device setting information) (e.g. 321 of FIG. 3, [0088]);

- a display section for displaying an operation and monitor screen (e.g. display device 56 of FIG. 5, [0099]);

- a definition information generation section (device control procedure creating module 324, [0096]) for generating the definition information (device setting information) based on the global address (object ID, [0118]), the attribute information (e.g. types of

Art Unit: 2451

the devices, [0103]) and the position information (a position on an associated coordinate system, [0118]) which are acquired through the network (the device control procedure creating module 324 acquires the device information, [0096]), and for storing the definition information in the storage section (stores the acquired device information in the device setting information database 321, [0096]);

a screen generation section (3D display processing module) for making the display section display the operation and monitor screen of the system component nodes (3D display processing module 321 for implementing the capability of displaying a network topology situation for a network manager, [0089]) from the definition information in the storage section (a database control module 323 for implementing database control functions for controlling necessary information for producing displays on the management console 31, [0091]); and

a control function providing section (e.g. database control module 323) for reading information defining an operation of the system component node from the storage section (for implementing database control functions for controlling necessary information for producing displays on the management console 31), and for outputting the read information to the communication section (a SNMP manager module 325 for actually performing control operations to the controlled device 34) [0091].

However, Miyake does not explicitly disclose component nodes generating a unique global address or transmitting the generated global address, attribute information of the system component node and installation position information of the system component node, to the network.

Forsl w teaches a plurality of system component nodes (mobile clients) each having a communication section for generating a unique global address by the system component node itself upon connection to the network (the mobile client 20 can alternatively generate its own IP address, column 19 lines 9-10), and for transmitting the generated global address (network address identifier), attribute information of the system component node (e.g. response to the challenge) (the mobile client 20 includes its network address identifier (NAI) and a response to the challenge in the registration request, column 20 lines 10-12) and installation position information of the system component node (service location protocols between the mobile client 20 and the mobile service router 10, column 9 lines 44-46), to the network.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to utilize self address generation and transmission of device information by the managed device in the system/method of Miyake as suggested by Forsl w in order to alleviate the managing node from having to assign addresses for each added node and using resources to acquire the required information. One of ordinary skill would recognize that obtaining this particular information is essential in managing a secure network, but that requiring the managing node to monitor, operate and gather the data increases the potential causes for errors in the system. One would be motivated to combine these teachings because automatically providing the management system with the necessary information would result in continued efficiency of management over a network including mobile devices to be managed, thus expanding the capabilities of the system.

However, although Miyake-Forsl w teach that the controlled device can be any network apparatus, Miyake-Forsl w do not explicitly disclose the plurality of system component nodes include at least one controller.

Gandhi teaches wherein the plurality of system component nodes include at least one controller (Control Points initiate discovery and communication with Controlled Devices, column 4 lines 56-64).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to utilize a controller, or control point, in the system/method of Miyake-Forsl w as suggested by Gandhi in order to enable communication and discovery with the controlled devices. One would be motivated to combine these teachings because a Control Point provides a means to monitor state changes and events and management a plurality of devices on a network.

However, Miyake-Forsl w-Gandhi do not explicitly disclose at least one of a sensor and an actuator.

Kim teaches wherein the plurality of system component nodes include at least one of a sensor and an actuator (the network 900 includes a sensor 902, column 19 lines 12-13).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to utilize sensors as the controlled devices in the system/method of Miyake-Forsl w-Gandhi as suggested by Kim in order to expand the possible uses for the management system. One of ordinary skill would recognize given the teachings of Miyake-Forsl w-Gandhi for a system capable of monitoring and controlling various

Art Unit: 2451

types of devices, that sensors would be an obvious type of device to be controlled. One would be motivated to combine these teachings because it would enable the system to control and monitor the environment within a building.

Regarding claim 3, Miyake teaches the control system as claimed in claim 1, wherein the definition information (device setting information) includes the global address (object ID, [0118]), an installation position (a position on an associated coordinate system, [0118]), a tag (object identifier, [0118]), a control function (notifies the manager 32 of the acquired MIB value (step 851); the result is registered in the device setting information database, [0103]) and a configuration of the operation and monitor screen of the system component node (e.g. the object ID of another object to be connected to an object on each network layer in the network, [0118]).

Regarding claim 4, Miyake teaches the control system as claimed in claim 1, wherein the definition information generation section (the device control procedure creating module 342) has an attribute information determination section (MIB value acquisition sequence) for determining validity of the attribute information (confirming whether or not a new controller device exists) [0103].

Regarding claim 5, Miyake teaches the control system as claimed in claim 1, wherein the attribute information includes at least one of a type (e.g. types of the devices, [0103]), a manufacturer, a model and a serial number of the system component node.



Regarding claim 6, Forsl w teaches the control system as claimed in claim 1, wherein each of the communication section of the system component node (mobile client) and the communication section of the management node (e.g. configuration server) has an address generation section for generating a unique global address (the mobile client 20 can alternatively generate its own IP address, column 18 lines 9-10; the configuration server 146 maintains an IP address pool from which it can allocate addresses, column 18 lines 1-2).

Regarding claim 7, Forsl w teaches the control system as claimed in claim 1, wherein each of the communication section of the system component node (mobile client) and the communication section of the management node (e.g. MSR) performs packet communication (e.g. the client's MSR 10 can handle the packets that are sent from the mobile client 20, column 10 lines 54-56).

Regarding claim 8, Gandhi teaches the control system as claimed in claim 7, wherein the communication section has an authentication section for adding authentication data to a header of a packet (A Control Point requests the preferred localized Device Description by using the standard HTTP "accept-language" header, column 10 lines 45-47; all subscriptions sent from that Control Point contain the same callback URL, column 22 lines 42-44), and determining validity of the received packet according to the authentication data added to the packet (if CALLBACK header is missing or does not

Art Unit: 2451

contain a valid HTTP URL, the service responds with HTTP error 412 Precondition Failed, column 81 lines 10-14).

Regarding claim 9, Forsl w teaches the control system as claimed in claim 7, wherein the communication section has a cryptograph processing section for encrypting a packet (IPSec component 100a is performing per packet authentication (AH) and/or encryption (ESP) for the traffic crossing the MVPN tunnel, column 14 lines 45-49).

Regarding claim 10, Forsl w teaches the control system as claimed in claim 7, wherein the communication section of the system component node (mobile client node) multicasts a packet to all of the management node and the system component nodes connected to the system (the mobile client may also broadcast or multicast an advertisement solicitation), and

the communication section of the management node receives the multicasted packet and sends a response to the received packet to the system component node (answered by any foreign agent that receives it, column 4 line 25-27).

However, Forsl w does not explicitly disclose a generated global address as a source address.

Gandhi teaches a generated global address (URLs are a format for expressing web addresses, column 11 lines 57-58) as a source address (a Control Point uploads the Device Description and extracts the URLs of the Servers running on the Controlled Device, column 12 lines 38-40).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to utilize including an address in a transmitted packet in the system/method of Forsl w as suggested by Gandhi in order to provide an identification of the sender. One of ordinary skill would recognize that including a source address in a packet is standard for most protocols. One would be motivated to combine these teachings because including this information, particular in a broadcast or multicast, conveys necessary information to the receiver regarding the transmitted data and how to reply if necessary.

Regarding claim 11, Forsl w teaches the control system as claimed in claim 6, wherein Internet protocol specification IPv6 is used as a communication protocol for connecting to the network (e.g. in an IPv6 network, column 18 lines 8-10).

Regarding claim 12, Forsl w teaches the control system as claimed in claim 1, wherein the system component node (mobile client) has a position detection section for detecting the installation position (e.g. the mobile client 20 may use a spatial location protocol to determine the geographic position of itself, column 12 lines 24-27).

Regarding claim 13, Kim teaches the control system as claimed in claim 12, wherein the position detection section detects the position using radio waves or ultrasonic waves (capabilities of radio technology also enable the positions of the sensors 902 to be determined, column 21 lines 40-42).

Regarding claim 14, Miyake teaches the control system as claimed in claim 1, wherein the network has a switching hub (ATM switch 1012 of FIG. 10, [0108], and the system component node (e.g. 1015a-1015f of FIG. 10) is connected to the switching hub (FIG. 10).

Regarding claim 16, Miyake teaches the control system as claimed in claim 1, wherein the management node performs communication with the system component node through the network (e.g. the SNMP manager or any alternative means issues a SNMP command or an alternative command to the respective controlled devices, [0105]).

***Allowable Subject Matter***

Claim 15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose that the controller has a self-learning section for learning more appropriate control functions by performing transmission and reception to and from the sensor and the actuator, and transmitting the learned control function to the management node, and the definition information generation section of the management node generating the definition information according to the control function from the controller.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MADHU KHANNA whose telephone number is (571)270-3629. The examiner can normally be reached on Monday-Thursday 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2451

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. K./

Examiner, Art Unit 2451

/Salad Abdullahi/

Primary Examiner, Art Unit 2457